

Claims:

1. A male connector for a guide wire, the male connector comprising a core wire, a plurality of conductive members spaced apart longitudinally along said core wire, a plurality of conductors disposed along the core wire, the conductors being connected to a respective conductive member, wherein at least one of the conductors extends from beyond a distal end of a respective connected conductive member towards a proximal end of the respective connected conductive member along at least a substantial portion of the respective connected conductive member.

2. The male connector according to claim 1, wherein the at least one conductor extending from beyond the distal end of the respective connected conductive member towards the proximal end of the respective connected conductive member is connected to the respective connected conductive member after passing by the distal end of the respective connected conductive member.

3. The male connector according to claim 2, wherein the at least one conductor extending from beyond the distal end of the respective connected conductive member towards the proximal end of the respective connected conductive member is connected to the proximal end of the respective connected conductive member.

4. The male connector according to claim 1, wherein the at least one conductor extending from beyond the distal end of the respective connected conductive member towards the proximal end of the respective connected conductive member extends through at least a substantial portion of the respective connected conductive member.

5. The male connector according to claim 1, wherein the at least one conductor extending from beyond the distal end of the respective connected conductive member towards the proximal end of the respective connected conductive member extends through the entire respective connected conductive member.

6. The male connector according to claim 1, wherein the at least one conductor extending from beyond the distal end of the respective connected conductive member towards the proximal end of the respective connected conductive member is not connected to the

respective connected conductive member at the distal end of the respective connected conductive member.

7. The male connector according to claim 1, wherein the at least one conductor extending from beyond the distal end of the respective connected conductive member towards the proximal end of the respective connected conductive member is in a loop which extends towards the proximal end of the male connector before extending back towards the distal end of the respective connected conductive member.

8. The male connector according to claim 7, wherein the at least one conductor extending from beyond the distal end of the respective connected conductive member towards the proximal end of the respective connected conductive member in a loop which extends towards the proximal end of the male connector before extending back towards the distal end of the respective connected conductive member extends past the proximal end of the respective connected conductive member before extending back towards the distal end of the respective connected conductive member.

9. The male connector according to claim 1, wherein the at least one conductor extending from beyond the distal end of the respective connected conductive member towards the proximal end of the respective connected conductive member is in a loop which extends towards the proximal end of the male connector before extending back to the distal end of the respective connected conductive member, where the conductor is connected to the respective connected conductive member.

10. The male connector according to claim 1, wherein the at least one conductor extending from beyond the distal end of the respective connected conductive member towards the proximal end of the respective connected conductive member is disposed in the connector such that a portion of the at least one conductor extending from beyond the distal end of the respective connected conductive member towards the proximal end of the respective connected conductive member bends substantially in the same manner as a portion of the respective connected conductive member.

11. The male connector according to claim 1, wherein the respective connected conductive member has a length L extending from the proximal end to the distal end of the

respective connected conductive member, wherein the at least one conductor extending from beyond the distal end of the respective connected conductive member towards the proximal end of the respective connected conductive member has a portion extending a length equal to L from the proximal end of the conductor, and wherein a majority of the portion extending a length equal to L from the proximal end of the conductor is supported by the respective connected conductive member and adjacent insulating material.

12. The male connector according to claim 1, wherein the at least one conductor extending from beyond the distal end of the respective connected conductive member towards the proximal end of the respective connected conductive member does not contact the respective connected conductive member until after passing the distal end of the respective connected conductive member.

13. The male connector according to claim 1, wherein the at least one conductor extending from beyond the distal end of the respective connected conductive member towards the proximal end of the respective connected conductive member extends in a loop outside the respective conductive member.

14. The male connector according to claim 13, wherein the at least one of the conductors extending in a loop is connected to the respective connected conductive member at the proximal end of the respective connected conductive member.

15. The male connector according to claim 7, wherein the loop portion of the at least one conductor extending from beyond the distal end of the respective connected conductive member towards the proximal end of the respective connected conductive member lies outside the respective connected conductive member.

16. A male connector for a guide wire, the male connector comprising a core wire, a plurality of conductive members spaced apart longitudinally along said core wire, a plurality of conductors disposed along the core wire, the conductors being connected to a respective conductive member, wherein at least one of the conductors extends in a loop outside the respective connected conductive member before connecting to the respective connected conductive member.

17. The male connector according to claim 16, wherein the at least one of the conductors extending in a loop is connected to the respective connected conductive member at the proximal end of the respective connected conductive member.

18. A male connector for a guide wire, the male connector comprising a core wire, a plurality of conductive members spaced apart longitudinally along said core wire, a plurality of conductors disposed along the core wire, the conductors being connected to a respective conductive member, wherein at least one of the conductors passes by, immediately before connecting to the respective connected conductive member, a portion of the connector that has a greater stiffness than the stiffness of an entire portion of the connector between the plurality of conductive members.

19. A male connector for a guide wire, the male connector comprising a core wire, a plurality of conductive members spaced apart longitudinally along said core wire, a plurality of conductors disposed along the core wire, the conductors being connected to a respective conductive member, wherein at least one of the conductors passes by, immediately before connecting to the respective conductive member, a portion of the connector that has a greater relative stiffness than a stiffness of an extra continuous outer insulating material between the plurality of conductive members.

20. A male connector for a guide wire, the male connector comprising a core wire, a plurality of conductive members spaced apart longitudinally along said core wire, a plurality of conductors disposed along the core wire, and an extra continuous outer insulating material between the plurality of conductive members, the conductors being connected to a respective conductive member, wherein at least one of the conductors passes by, immediately before connecting to the respective conductive member, a portion of the connector that has a greater relative stiffness than a portion of the connector between the respective connected conductive member and the extra continuous outer insulating material.

21. A male connector for a guide wire, the male connector comprising a core wire, a plurality of conductive members spaced apart longitudinally along said core wire, a plurality of conductors disposed along the core wire, the conductors being connected to a respective conductive member, wherein at least one of the conductors passes by, immediately before connecting to the respective conductive member, a portion of the connector that has a greater

relative stiffness than a portion of the connector immediately past the proximal and distal ends of the respective connected conductive member.